



## Postgraduate Certificate

## Elbow Ultrasound in Physiotherapy

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/in/physiotherapy/postgraduate-certificate/elbow-ultrasound-physiotherapy

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# 01 Introduction

Ultrasound is the main diagnostic method used in physiotherapy to explore the extent of elbow injuries, the use of which requires a high level of expertise to visualize tendons, ligaments and nerves with full accuracy. This not only depends on the detection of the pathology, but also conditions the choice of therapies to ensure the recovery of the affected patient, so having extensive skills in this field is crucial to promote their welfare. Because of this, TECH has created this program that, exclusively online, will allow the physiotherapist to increase their skills in the diagnosis and treatment of tendinopathies or tenosynovitis to become a professional reference.



## tech 06 | Introduction

Tendinopathies, tenosynovitis or bursitis in the elbow are some of the many injuries that are frequently diagnosed daily in rehabilitation centers or clinics by physiotherapists. To optimize their detection, these professionals use modern ultrasound scanners that offer a high quality vision in real time and make it possible to choose the most appropriate physiotherapeutic plan for each patient and each type of injury. The use of these devices, therefore, has a very positive impact on the recovery process, which is why physiotherapy professionals are required to have extensive and updated capabilities for its management.

For these reasons, TECH has promoted the creation of this program, which will enable students to expand their knowledge and identify the latest scientific advances in the field of Elbow Ultrasound in Physical Therapy, in order to promote their professional growth. Throughout this academic itinerary, students will adopt the most efficient techniques to explore the main pathologies produced in the lateral or posterior aspect of the elbow, such as olecranial bursitis or external collateral ligament ailments. You will also assimilate the most optimal guidelines to perform the dynamic tests of the elbow that help detect the extent of various injuries.

Since this program has a 100% online mode, students will be able to achieve effective learning by managing their own study schedules. Likewise, this program is taught by specialists in Physical Medicine and Rehabilitation and actively practicing experts in Physical Therapy, who will provide the student with a completely updated set of knowledge.

This Postgraduate Certificate in Elbow Ultrasound in Physiotherapy contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of practical case studies presented by experts in Physical Rehabilitation Medicine and Physiotherapy
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



Progress in your sector, in just 6 weeks, through the skills you will acquire in the use of ultrasound to treat elbow injuries in this program"



This program is taught by physicians specialized in Physical Medicine and Rehabilitation and by experts in Physiotherapy, who will provide you with the most updated knowledge in ultrasound management"

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

Increase your knowledge in the management of Olecranian bursitis, from its diagnosis by ultrasound to its subsequent treatment, to improve the recovery of patients suffering from it.

The 100% online nature of this program allows you to achieve excellent learning without giving up your professional or personal obligations.





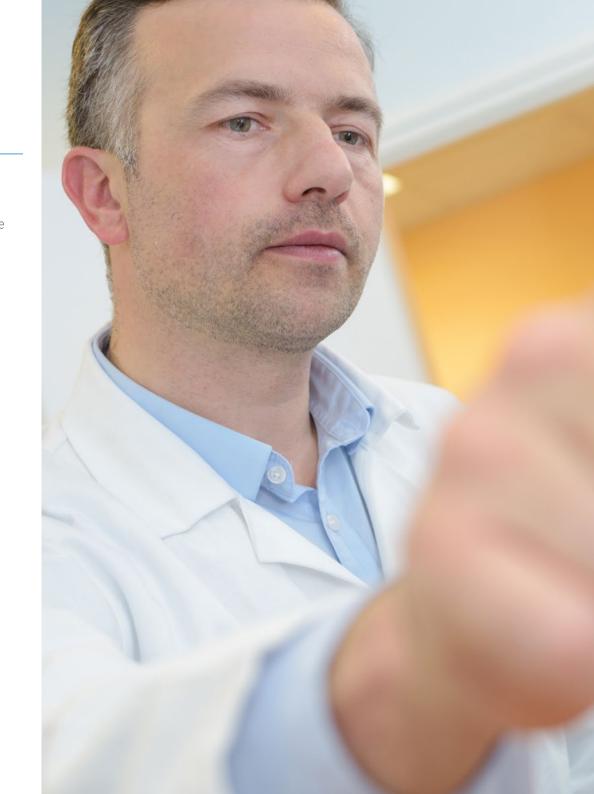


## tech 10 | Objectives



## **General Objectives**

- Learn to locate the different anatomical structures of the region
- Identify pathologies for a correct treatment of ultrasound-guided rehabilitation medicine
- Define the limits of ultrasound
- Learn about the use of ultrasound in the framework of physiotherapist skills





### **Specific Objectives**

- Describe the sonoanatomy of the elbow joint
- Describe the normal examination of the structures of the anterior aspect of the elbow
- Describe the normal examination of the structures of the lateral aspect of the elbow
- Describe the normal examination of the structures of the posterior aspect of the elbow
- Describe the normal examination of the structures of the medial aspect of the elbow
- Identify the most common lesions of the elbow, to ensure correct ultrasound-guided treatment and/or monitoring of their evolution
- Learn how to perform ultrasound-guided dynamic assessment tests for the elbow
- Describe the least common pathologies that can affect the elbow joint



Deliver state-of-the-art physiotherapy services to your patients with elbow injuries through this academic program"







## tech 14 | Course Management

#### Management



#### Dr. Castillo Martín, Juan Ignacio

- Head of Physical Medicine and Rehabilitation Service. 12 de Octubre Hospital. Madri
- Doctor Specialist in Physical and Rehabilitation Medicine, Hospital Complex Ruber Juan Brave
- Rehabilitation Physician at the Traffic Accidents Unit of the Ruber Juan Bravo Hospital Complex
- Rehabilitation Physician. Recoletas Cuenca Hospital
- Coordinator of continuing education of the Spanish Society of Cardiology in Exercise Testing with Oxygen Consumption
- Associate Professor, Complutense University of Madrid. Faculty of Medicine
- Teaching coordinator in continuing education courses at the Madrid Regional Ministry of Health: "Tertiary prevention in chronic cardiopathic patients. Cardiac Rehabilitation"
- Degree in Medicine and Surgery. University of Salamanca
- Master's Degree in Cardiac Rehabilitation. SEC-UNED
- Master in Disability Assessment Autonomous University Madrid
- Master Child Disability. Complutense University of Madrid
- Doctorate Course: Neurosciences University of Salamanca
- Member of the Spanish Society of Cardiology



## Course Management | 15 tech

#### **Professors**

#### Dr. Santiago Nuño, Fernando

- Physiotherapist and podiatrist at the Armstrong International Clinic
- Orthopedist at Ortoaccesible
- Professor of Musculoskeletal Ultrasound and Ultrasound-guided Infiltrations at the Complutense University of Madrid and the European University of Madrid
- Doctor in Podiatry from the University of La Coruña
- Physiotherapist specializing in Traumatology, Neurology and Rehabilitation of Sports Injuries at Armstrong International Clinic
- Master's Degree in Advanced Clinical Podiatry from the CEU Cardenal Herrera University
- Master's Degree Own in Clinical Management, Medical and Healthcare Management from the CEU - Cardenal Herrera University Oria
- Master's Degree in Pediatric Musculoskeletal Ultrasound at the CEU Cardenal Herrera University
- Master's Degree in Manual Therapy from the Complutense University of Madrid
- Master in On-line Research in Podiatry from Rey Juan Carlos University Madrid
- Master of Specialist and Supervisor of Orthopedic Products by Universidad Complutense Madrid

## tech 16 | Course Management

#### Dr. Casado Hernández, Israel

- Director of Vitalpie
- Podiatrist in grassroots soccer clubs such as Getafe CF or AD Alcorcón
- Associate Teacher in university studies
- Author of 20 scientific articles and 7 book chapters
- Ph.D. in Epidemiology and Clinical Research in Health Sciences from the Universidad Rey Juan Carlos
- Degree in Medicine Podiatry from the Complutense University of Madrid
- Master's Degree in Research in Podiatry from Rey Juan Carlos University

#### Dr. García Expósito, Sebastián

- · Radiodiagnostic technician at the Sanitas Women's Center
- Radiodiagnostic Technician at Hospital de la Zarzuela
- Degree in Bioimaging Production from the National University of Lomas de Zamora

#### Dr. Moreno, Cristina Elvira

- Physiotherapist at Nupofis clinic
- Physiotherapist at Clínica Fisios Islas 21
- Physiotherapist in Clinica Mas Fisio
- Physiotherapist in Parkinson's Association Madrid
- Degree in Physiotherapy from the Complutense University of Madrid
- Master's Musculoskeletal Ultrasound in in Physiotherapy from CEU San Pablo University

#### Dr. Nieri, Martín

- CEO of in Ultrasound Assistance & Teleradiology Service SL
- Director of the Ultrasound Quality Control Department at Servicio en Asistencia Ultrasonido
   & Teleradiología SL
- Diagnostic free lance Imaging Technician
- Teacher in Ultrasound training courses

#### Dr. Pérez Calonge, Juan José

- Podiatrist at Clínica Podológica Gayarre
- Author of the article Technique of direct examination of onychomycosis by microscopy with potassium hydroxide
- Doctorate in Health Sciences from the Public University of Navarra
- Official Master's Degree in Health Expertise from the Complutense University of Madrid
- Official Master's Degree in Advanced Podiatry by CEU
- Expert in Surgery from the Complutense University of Madrid
- Course on Foot Infiltration by the Complutense University of Madrid

#### Dr. Sánchez Marcos, Julia

- Physiotherapist and osteopath in Isabel Amoedo Physiotherapy Clinic
- Physiotherapist at the Vithas Hospital Nuestra Señora de Fátima
- Physiotherapist at-ASPODES-FEAPS
- Physiotherapist at Fisiosalud Clinic
- Master's Degree in Electrotherapy from CEU Cardenal Herrera University
- Expert in Ultrasound Sonoanatomy of the Locomotor Apparatus by the European University
- Course of Neurodynamics by Zerapi Fisioterapia Avanzada
- Course of Percutaneous Therapeutic Electrolysis "EPTE"
- Course of Neurodynamic Myofascial and Articular Fibrolysis "Hooks" by Instema
- Diathermy Course by Helios Electromedicina



## Course Management | 17 tech

#### Dr. Santiago Nuño, José Ángel

- Dietician and nutritionist in different physiological situations in Medicadiet
- Diploma in Physiotherapy from San Pablo CEU University
- Postgraduate Certificate in Human Nutrition and Dietetics from San Pablo CEU University
- Post-graduate degree in Food Exchanges System Specialist for the preparation of diets and menu planning by the University of Navarra
- Physiotherapist specializing in Traumatology, Neurology and Rehabilitation of Sports Injuries at Armstrong International Clinic
- Specialist Master's Degree in Sports Physiotherapy from the Complutense University of Madrid
- Expert in Traditional Chinese Medicine and Acupuncture for Physiotherapists at the University of Castilla La Mancha

#### Dr. Teijeiro, Javier

- Physiotherapist and technical director of the Physiotherapy Service of the Centro Asistencial San Pablo y San Lázaro de Mondoñedo
- Regional delegate of the Spanish Society of Ultrasound and Physiotherapy
- Physiotherapist of the Dinán Viveiro Clinic
- Doctorate in Health, Disability, Dependency and Welfare
- Master's Degree in Natural Medicine and its applications in Primary Health Care from the University of Santiago de Compostela
- Master's Degree in Pharmacology for Physiotherapists from the University of Valencia
- Official Master's Degree in Intervention in Disability and Dependency from the University of A Coruña
- Master's Degree in Diagnostic Imaging from the University of Valencia
- Postgraduate Diploma in Musculoskeletal Ultrasound from Francisco de Vitoria University





## tech 20 | Structure and Content

#### Module 1. Ultrasound of the Upper Limb: Elbow

- 1.1. Normal Sonoanatomy of the Elbow
  - 1.1.1. Examination of the Anterior Aspect Structures
  - 1.1.2. Examination of the Lateral Aspect Structures
  - 1.1.3. Examination of the Medial Aspect Structures
  - 1.1.4. Examination of the Posterior Aspect Structures
- 1.2. Elbow Pathology
  - 1.2.1. Most Common Tendon Pathology
  - 1.2.2. Other Elbow Joint Pathology
- 1.3. Dynamic Tests on the Elbow





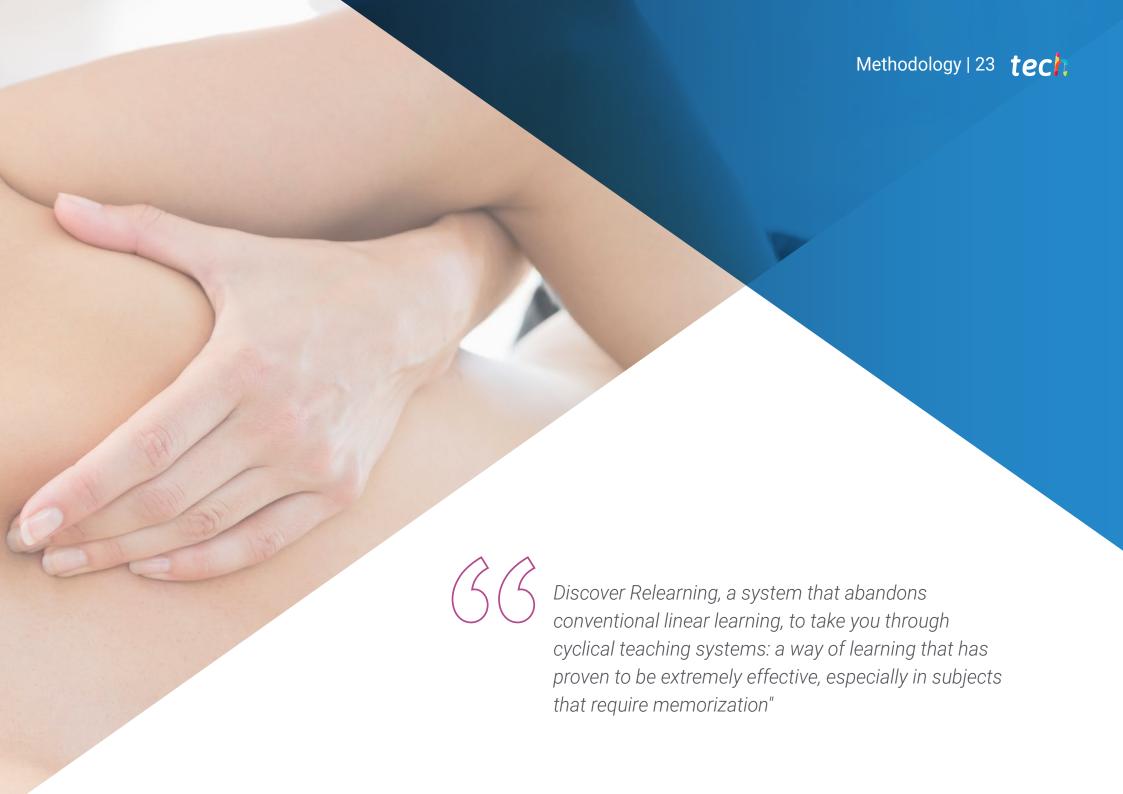
Through accessible didactic contents of video, readings or interactive summaries, you will obtain the best learning in Elbow Ultrasound in Physical Therapy"





This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.** 

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

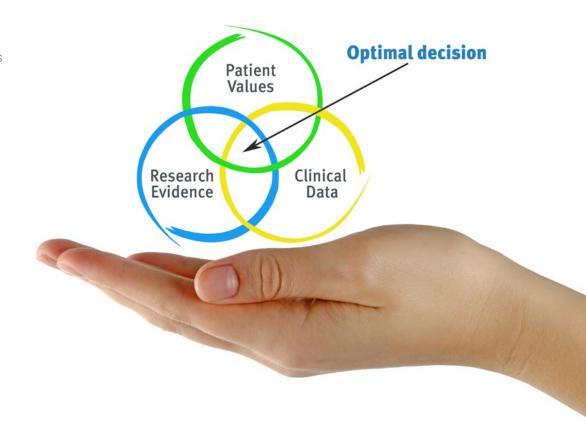


## tech 24 | Methodology

#### At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Physiotherapists/kinesiologists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional physiotherapy practice.



Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

#### The effectiveness of the method is justified by four fundamental achievements:

- 1. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- **4.** Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.





### Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

The physiotherapist/kinesiologist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



### Methodology | 27 tech

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.

This program offers the best educational material, prepared with professionals in mind:



#### **Study Material**

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is really specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### **Physiotherapy Techniques and Procedures on Video**

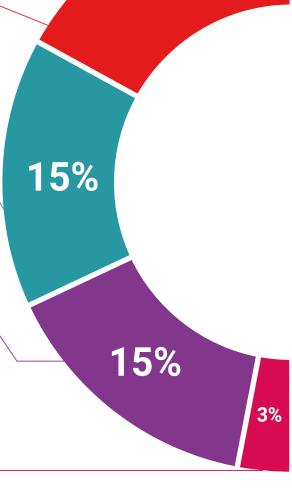
TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **Interactive Summaries**

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





#### **Additional Reading**

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.



Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### **Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts.

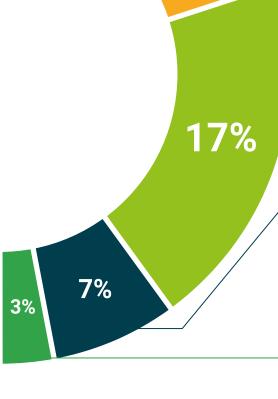
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.





20%





## tech 32 | Certificate

This Postgraduate Certificate in Elbow Ultrasound in Physiotherapy contains the most complete and up-to-date scientific on the market.

After the student has passed the assessments, they will receive their corresponding Postgraduate Certificate diploma issued by TECH Technological University via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and it meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: Postgraduate Certificate in Elbow Ultrasound in Physiotherapy

Official No of Hours: 125 h.



#### Elbow Ultrasound in Physiotherapy

This is a qualification awarded by this University, equivalent to 125 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

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